

Appendix A

Resource Inventory

Memorandum

To: Richard Smit
From: Jamie Bankston
Subject: Resource and Study Area Inventory
Date: August 15, 2003
Project: 49/41-016-DEU-300
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This memorandum is a summary of resource and study area materials that Barr Engineering has reviewed and findings that are relevant to the Kinnickinnic River Sediment Removal Concept Plan.

Site Specific Documents/Data – Contaminated Sediments

1. Li, et al. 1995. *Toxic Organic Contaminants in the Sediments of the Milwaukee Harbor Estuary, Phase III – Kinnickinnic River Sediments*. University of Wisconsin – Milwaukee.
2. *Milwaukee Estuary Remedial Action Plan (progress through January 1994)- A Plan to Clean Up Milwaukee's Rivers and Harbors*. January 1994.
3. Map of 1994 and 2002 Sediment Sampling Locations
4. 1994 Total PAH and PCB data
5. Kinnickinnic River Water Depths Map – September 6, 2002
6. Kinnickinnic River Soft Sediment Thickness Map – September 6, 2002
7. Locations of USGS Stream gauging stations on the Kinnickinnic River
8. Notes from the Milwaukee Brownfields Meeting – December 12, 2000
9. Altech Environmental Services, Inc. March 2003. *Sediment Sampling From the Kinnickinnic River, Milwaukee, Wisconsin*.
10. Coleman Engineering. October 2002. *Report of: Subsurface Investigation for Kinnickinnic River, Milwaukee Wisconsin*.
11. Barr Engineering. 2002. *Kinnickinnic River Sediment Removal Concept Design Scoping Meeting Minutes, November 13, 2002*.

Source: USACE & WDNR. April 7, 2004. Kinnickinnic River, Wisconsin - Milwaukee Estuary of Concern - Deepening/Remediation Concept Design Documentation Report. Appendix A.

12. Barr Engineering. 2003. *Kinnickinnic River Seawall Evaluation Report – Milwaukee, Wisconsin*.
13. Barr Engineering. 2003. *Kinnickinnic River Sediment Removal Concept Design Plan Formulation Meeting Minutes, May 9, 2003*.
14. Map of Remediation Area (Enclosure 4)
15. Photo log of Kinnickinnic River Study Area (Corps)
16. Map of Milwaukee Harbor Wisconsin (Corps 1986)
17. City of Milwaukee Plat Maps of properties near proposed dredging area.
18. EPA listing of commercially permitted PCB disposal companies

Guidance Documents/Background Literature – Contaminated Sediments

1. *Technical Guidance for Contaminated Sediment Clean-Up Decisions in Wisconsin (Preliminary Draft)*. Sediment Management and Remediation Techniques Program, Bureau of Water Resources Management, Wisconsin Department of Natural Resources. December 21, 1995.
2. *Process Steps for Assessing Sediment Quality and Developing Sediment Quality Objectives Protective of Human Health, Aquatic Organisms (water column and benthic) and Aquatic Dependent Wildlife (e.g. terns, raptors, mink)*. Wisconsin Department of Natural Resources. February 27, 2001.
3. *Assessing Sediment Quality in Water Bodies Associated with Manufactured Gas Plant Sites (PUBL-WR-447-96)*. Sediment Management and Remediation Techniques Program and Environmental Repair Program, Wisconsin Department of Natural Resources. March 1996.
4. *Technical Guidance for Screening Contaminated Sediments*. New York State Department of Environmental Conservation, Division of Fish, Wildlife and Marine Resources. January 1999.
5. *Prediction of Sediment Toxicity Using Consensus-Based Freshwater Sediment Quality Guidelines (EPA 905/R-00/007)*. USGS final report for the U.S. EPA Great Lakes National Program Office (GLNPO). June 2000.
6. *Bioremediation of PAH-Contaminated Dredged Material at the Jones Island CDF: Materials, Equipment, and Initial Operations*. DOER Technical Notes Collection (TN DOER-C5), U.S. Army Engineer Research and Development Center, Vicksburg, MS. September 1999.

Source: USACE & WDNR. April 7, 2004. Kinnickinnic River, Wisconsin - Milwaukee Estuary of Concern - Deepening/Remediation Concept Design Documentation Report. Appendix A.

7. *Concepts and Technologies for Bioremediation in Confined Disposal Facilities*. DOER Technical Notes Collection (ERDC TN-DOER-C11), U.S. Army Engineer Research and Development Center, Vicksburg, MS. March 2000.
8. Long, E.R. and L.G. Morgan. 1991. *The Potential for Biological Effects of Sediment Sorbed Contaminants Tested in the National Status and Trends Program*. National Oceanic and Atmospheric Administration. National Ocean Service, Seattle. NOAA Technical Memorandum NOS OMA 52.
9. *Guidelines for Deriving Site-Specific Sediment Quality Criteria for the Protection of Benthic Organisms* (EPA-822-R-93-017). United States EPA Office of Water and Office of Research and Development. September 1993.
10. *Assessment and Remediation of Contaminated Sediments (ARCS) Program – Final Summary Report* (EPA-905-S-94-001). United States EPA. August 1994.
11. *Sediment Quality Criteria for the Protection of Benthic Organisms: Acenaphthene* (EPA-822-R-93-013). United States EPA. September 1993.
12. *Sediment Quality Criteria for the Protection of Benthic Organisms: Fluoranthene* (EPA-822-R-93-012). United States EPA. September 1993.
13. *Sediment Quality Criteria for the Protection of Benthic Organisms: Phenanthrene* (EPA-822-R-93-014). United States EPA. September 1993.
14. Palermo, M.R., J.E. Clausner, M.P. Rollings, G.L. Williams, T.E. Myers, T.J. Fredette, and R.E. Randall. 1998. *Guidance for Subaqueous Dredged Material Capping*. U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, MS. Technical Report DOER-1. Available on the Internet at <http://www.wes.army.mil/el/dots/doer/pdf/doer-1.pdf>
15. USACE. April 22, 2000. *Appendix G, feasibility report contents, ER 1105-2-100*.
16. USACE. July, 30 1999. *Digest of Water Resources Policies and Authorities, EP 1165-2-1*.
17. USACE. October, 15 1996. *Technical and Policy Compliance Review, EC 1165-2-203*.
18. USACE. August 31, 1999. *Engineering and Design for Civil Works Projects, ER 1110-2-1150*.
19. USACE. 2001. *Subaqueous Cap Design: Selection of Bioturbation Profiles, Depths and Process Rates*. DOER Technical Notes Collection (ERDC TN-DOER-C21). U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, MS. Available at <http://www.wes.army.mil/el/dots/doer/technote.html>

Source: USACE & WDNR. April 7, 2004. Kinnickinnic River, Wisconsin - Milwaukee Estuary of Concern - Deepening/Remediation Concept Design Documentation Report. Appendix A.

20. U.S. EPA. November 2002. *Draft Contaminated Sediment Remediation Guidance for Hazardous Waste Sites, OSWER 9355.0-85 DRAFT.*
21. U.S. EPA. 1998. *Assessment and Remediation of Contaminated Sediments (ARCS) Program Guidance for In-Situ Subaqueous Capping of Contaminated Sediments.* Prepared for the Great Lakes National Program Office, U.S. Environmental Protection Agency, Chicago, IL. EPA 905/B-96/004. Available on the Internet at <http://www.epa.gov/glnpo/sediment/iscmain>.
22. WDNr. 2003. *Draft Report - Identification of PCB and PAH Sources to the Sediment in the Kinnickinnic River Between Becher St. and Kinnickinnic Ave.*

Examples/Information From Other sites –Contaminated Sediments

1. Final Feasibility Study – Lower Fox River and Green Bay, Wisconsin Remedial Investigation and Feasibility Study. Retec Consulting Corporation. December 2002.
2. Ecological Risk Assessment of Contaminated Offshore Sediments in Ashland, Wisconsin (Summary). Technical Outreach Services for Communities (TOSC). Christopher Marwood.
3. Final Remedial Alternatives Evaluation – River Raisin 307 Site, Monroe, Michigan. Harding ESE of Michigan, Inc. April 2002.
4. *Draft Concept Design Documentation Report for Sediment Remediation – Whitehall Leather Company Site, Whitehall, Michigan.* Snell Environmental Group, Inc. July 2000.

Site Specific Documents/Data –Seawall

1. Map of area showing bridge clearances and spans
2. Construction permits and records for all SSP walls in vicinity
3. Construction permits and records for most timber walls
4. Milwaukee Port Authority Parcel Map
5. Port Authority inspection report on walls from 1990
6. Construction Permit and records for timber pile fence protecting RR bridge upstream from KK Avenue Bridge

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